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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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| EXAMINER |
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| ART UNIT | PAPER NUMBER |
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DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/580.515

Applicant(s)

SHORT ET AL.

Examiner

Delia M. Ramirez

Art Unit

1652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☐ Claim(s) ____ is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims 1-40 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Status of Application

Claims 1-40 are pending. The Information Disclosure Statement in Paper No. 4, filed on 1/2/2001 is acknowledged

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-5, drawn to a method for improving the nutritional value of phytate-containing foodstuff, classified in class 435, subclass 196.
- II. Claims 6-16, drawn to vectors and host cells comprising a nucleic acid molecule encoding a phytase according to SEQ ID NO: 2, classified in class 435, subclass 320.1.
- III. Claims 17 and 19, drawn to a plant and plant parts containing an expression system which comprises a nucleic acid molecule encoding a phytase according to SEQ ID NO: 2 as well as a composition comprising said plant and plant parts, classified in class 800, subclass 29.5.
- IV. Claim 18, drawn to a method to produce animal feed containing a microbial phytase, classified in class 435, subclass 196.
- V. Claim 20, drawn to a method to treat a human or animal, classified in class 424, subclass 94.6.

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- VI. Claim 21, drawn to a transgenic non-human organism which can express a phytase polypeptide, classified in class 800, subclass 8.
- VII. Claim 22-33, drawn to a method of generating a variant, classified in class 800, subclass 278.
- VIII. Claim 34, drawn to a computer readable medium having stored thereon the nucleic acid sequence according to SEQ ID NO: 1, classified in class 711, subclass 4.
- IX. Claim 35-38, drawn to a computer system wherein a data storage device contains the nucleic acid sequence according to SEQ ID NO: 1, classified in class 717, subclass 11.
- X. Claim 39-40, drawn to a method for comparing the sequences according to SEQ ID NO: 1 or 2 against a sequence database to identify polymorphisms, classified in class 707, subclass 3.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I, IV, V, or X are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the vectors and host cells comprising the nucleic acid molecule encoding the phytase of SEQ ID NO: 2 are neither made nor used by the methods of Inventions I, IV, V, or X.

Inventions X and I, IV, V, or VII are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the

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instant case the methods of Inventions X and Inventions I, IV, V, or VII are not disclosed as capable of use together, comprise different steps, have different functions, and produce different results.

Inventions II and VII are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the vectors of Invention II can be used to create the transgenic non-human organism of Invention VI or the plant and plant parts of Invention III.

Inventions VIII-IX and III, VI, VIII, and IX are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the vectors and host cells of Invention II, the plant of Invention III, and the transgenic non-human organism of Invention VI are biological substances with different uses and no functional relation to the computer system of Invention IX or the computer readable medium of Invention VIII.

Groups II, III, and VI each comprise a chemically unrelated structure capable of separate manufacture, use, and effect. The DNA in vectors and host cells of Group II comprise a nucleic acid sequence whereas the plant of Invention III and the transgenic non-human organism of Invention VI each comprise a different and unrelated multicellular system. The vectors and host cells of Group II have other applications besides being used to make the plant of Group III or the transgenic organism of Group VI such as expressing the phytase of SEQ ID NO: 2. The plant of

Group III and the transgenic organism of Group VI each can be used in processes which are materially different such as to produce the phytase of SEQ ID NO: 2 or *in vivo* testing.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, as shown by their different classification, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement can be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Certain papers related to this application may be submitted to Art Unit 1652 by facsimile transmission. The FAX number is (703) 308-4556. The faxing of such papers must conform with the notices published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 CFR 1.6(d)). NOTE: If Applicant submits a paper by FAX, the original copy should be retained by Applicant or Applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED, so as to avoid the processing of duplicate papers in the Office.

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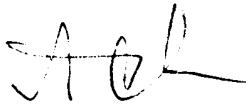
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delia M. Ramirez whose telephone number is (703) 306-0288.

The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Ponnathapura Achutamurthy can be reached on (703) 308-3804. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Delia M. Ramirez, Ph.D.
Patent Examiner
Art Unit 1652

DR
September 17, 2001



PONNATHAPURA ACHUTAMURTHY
SUPERVISOR, ART UNIT 1652
TECHNICAL STAFF